

REVIEW

Helechos de Mbaracayú, by María Peña-Chocarro, Griselda Marín, Belén Jiménez, and Sandra Knapp. 1999. The Natural History Museum, London. 142 pages. Softcover (ISBN 0 565 09137 9) £3.00. Available from The Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom, and from Fundación Moisés Bertoni, Casilla 714, Asunción, Paraguay.

This book, written in Spanish, is a popular identification guide to the 115 species of pteridophytes growing in Mbaracayú, a 650 km² reserve in eastern Paraguay. Nearly 80% of the reserve consists of relatively undisturbed wet forest, and the rest is mostly savanna, or *cerrado*, that occurs on well-drained soils. Both habitats harbor pteridophytes.

What distinguishes this guide is its highly visual approach. There are *a lot* of illustrations. Each species treatment is allotted a full page, and that page is filled with illustrations, including silhouettes of leaves and drawings of venation and sorus shape. The rhizomes are usually shown in the silhouettes if the plant is of small size. Toward the bottom of the page is a short description with the main characters in boldface, followed by a statement of geographic distribution and notes. Below this, at the bottom of the page, are five boxes containing standardized pictures that give the plant's habit and size (first box), sorus shape, habitat, growth habit, and (last box) any characteristic helpful in identifying the plant.

The main key at the beginning of the book repeats these five boxes so that, again, identification is primarily visual. The key is divided into ten groups based primarily on leaf cutting, from entire to more highly divided. The species treatments are grouped in the text by this characteristic, and in the middle of the fore-edge of each page a shaded side-box encloses a leaf symbol showing the degree of cutting. This allows you to flip through the guide and quickly find the main leaf-division sections.

At the end of the book is a list of the pteridophytes ordered by family (22 families and 46 genera are recognized). This is followed by a bibliography and index to scientific names. There is no glossary because technical terms have been kept to a minimum. Unfamiliar terms can be sought in the introduction that explains the parts of the fern plant.

My only complaint is that several of the drawings are inaccurate or of poor quality. For instance, the drawing of *Salvinia minima* does not accurately show the arrangement of the sori on the submerged leaf, nor does it depict the numerous and conspicuous hairs on the submerged segments. Also, one of the sori appears to be fused with another sorus—something that does not occur. In the illustration of *Psilotum nudum*, the synangia are poorly drawn, the bifid enation beneath it is missing, and a long stalk is shown attaching to the side, not the base, of one synangium (were the synangia really that long-stalked?). The indusia on *Adiantum raddianum* are shown separated from (i.e., within)

the leaf margin, not formed from an enrolling of it. I find it hard to believe that *Cyathea atrovirens*, or any extant tree fern, has thick prop roots as is illustrated for that species.

Despite problems with some of the illustrations, this guide will be useful to botanists working in Paraguay and nearby regions in adjacent countries. At a price of £3.00, it is easily affordable. The authors should be congratulated on the care they have taken in making this guide easy-to-use and for their highly visual approach.—ROBBIN C. MORAN, The New York Botanical Garden, Bronx, NY 10458–5126, U.S.A.